



STATE OF DELAWARE  
**DEPARTMENT OF NATURAL RESOURCES AND  
ENVIRONMENTAL CONTROL**  
DIVISION OF WASTE AND HAZARDOUS SUBSTANCES  
89 KINGS HIGHWAY  
DOVER, DE 19901

COMPLIANCE &  
PERMITTING

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**RESOURCE RECOVERY FACILITY  
PERMIT NO. SW-16/12**

Issue Date: December 16, 2016  
Modification Date: December 27, 2019  
Expiration Date: December 16, 2021

Issued to: Clean Earth of New Castle, LLC  
94 Pyles Lane  
New Castle, DE 19720

Contact Person: Mr. Paul Lane, Regional General Manager  
Telephone Number: (302) 427-6633

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Pursuant to 7 *Del. C.*, Section 6003(a)(4) and Delaware's *Regulations Governing Solid Waste* ("DRGSW"), Clean Earth of New Castle, LLC ("CENC") is hereby permitted by the Department of Natural Resources and Environmental Control (the "Department") to operate a thermal and biological desorption facility located at 94 Pyles Lane, New Castle, Delaware for the processing of non-hazardous petroleum hydrocarbon contaminated soils for the purpose of re-use or recycling. Resource Recovery Facility Permit No. SW-16/12 ("Permit") is issued in accordance with CENC's October 14, 2019 request to renew and modify Permit SW16-12, the Resource Recovery Permit Renewal application dated June 23, 2017. The application includes the "General Operations Plan – Thermal Remediation and Recovery of Petroleum Hydrocarbon Contaminated Soils," which is supplemented by three operating modules: "Operating Module 1: Management Procedures for Direct Reuse Soils ("DRS")" revised September 2019; "Operating Module 2: Management Procedures for Non-Hazardous Recyclable Materials ("NHRM") Processing Systems revised November 18, 2016; and "Operating Module 3: Management Procedures for Biological Remediation Soils ("BRS")" revised November 18, 2016. Conditions of this Permit shall take precedence over any of the above listed documents. Failure to comply with any condition of this Permit or any provision within the aforementioned documents is a violation of this Permit. This Permit supersedes and replaces all prior Resource Recovery Facility permits issued to CENC. This Permit does not relieve CENC from complying with any other applicable Federal, State, or Local laws, regulations or ordinances.

## **I. GENERAL CONDITIONS:**

### **A. Applicability:**

This Resource Recovery Facility permit applies to the process of accepting, storing, thermally or biologically treating and re-using soils contaminated with non-hazardous petroleum hydrocarbons, non-PCB containing mineral oil, other natural oils, and Manufactured Gas Plant ("MGP") coal distillate.

Additionally, this permit applies to the process of amending the treated soils with NHRM for beneficial reuse. The thermal desorption unit is permitted to treat at a rate not to exceed 60 tons/hour. The quantity of NHRM to be added to amended soils will not exceed 1,440 tons/day.

This permit also applies to the physical processing of Direct Reuse Soils. Direct Reuse Soils are those that, upon receipt, meet all the requirements of Sections III.A and III.G of this permit. The facility may physically process these soils to remove residual materials, such as rock, brick, stone, etc. and is not required to thermally or biologically treat these soils.

### **B. Security:**

The permittee shall construct and maintain a security system necessary to restrict unauthorized access to the facility at all times.

### **C. Equipment Inspection and Maintenance:**

The permittee shall conduct inspections per the submitted Operations Plan and maintain the facility in a manner to comply with the conditions of this permit. These inspection records shall be maintained on site for at least three (3) years and made immediately available to the Department upon request. Inspection and maintenance shall include, at a minimum:

1. Daily equipment inspection. Equipment maintenance shall be conducted in accordance with manufacturers' recommendations at a minimum.
2. Weekly inspections of the tank farm and other waste management/storage areas
3. Monthly inspections of all safety equipment, including, as applicable, fire extinguishers, spill equipment, supplies, and communications equipment

Any deficiencies shall be recorded and brought to the Facility Manager's attention for appropriate corrective action.

### **D. Expiration:**

This permit shall expire five (5) years from the Issue Date. Per DRGSW Section 4.1.6, the permittee shall submit a permit application with all supporting documentation to the Department at least one hundred and eighty (180) days prior to expiration.

### **E. Access:**

Representatives of the Department may, at any reasonable time, inspect this facility to verify compliance with the permit requirements, DRGSW and 7 Del. C. Chapter 60.

F. Revocation:

This permit may be revoked upon violation of any condition of this permit, DRGSW or 7 Del. C. Chapter 60.

G. Modifications:

The Department has the authority to modify this permit at any time.

H. Permit availability:

A copy of this permit shall be maintained at this facility and immediately made available to any Department representative upon request.

I. Permit Transfer:

At least 60 days prior to the date of the proposed transfer, the permittee shall submit all documentation required by DRGSW Section 4.1.8. The actual transfer will be contingent upon the transferee meeting all permit and regulatory requirements; until such time, the current permittee shall remain liable for compliance with all solid waste permit requirements, including liability for financial assurance and closure care.

J. Hours of Operation:

The hours of operation for this facility are 24 hours/day, 7 days per week; however, the thermal desorption unit and associated control equipment shall not operate more than 6,000 hours per year.

K. Dust Control

No dust shall be allowed to migrate off of the facility's property. Dust shall be controlled at the CENC facility by:

1. Using a processed material conditioner as the processed material exits the dryer.
2. Using a wet spray system
3. Using a street sweeper and/or water spray truck
4. Other means as necessary.

L. Odor Control:

This facility shall not cause or allow the emission of an odorous air contaminant in such quantities as to interfere with any person's enjoyment of life or property. Odors shall not be perceived beyond CENC's property boundaries. Any odor complaints received shall be documented and records of the complaints shall be immediately available to the Department upon request.

M. Stormwater Retention Pond:

In the event of stormwater runoff from contaminated soils or leakage of petroleum hydrocarbons from truck traffic and on-site equipment, sediment removed from the stormwater retention pond will be contaminated with hydrocarbons. For this reason, prior to disposal or reuse, sediment removed from the stormwater retention pond shall be treated in the thermal desorption unit or via bioremediation and shall satisfactorily comply with the conditions of Section III of this permit. This sediment may be blended with treated or untreated soils as necessary to achieve appropriate moisture content for proper treatment in the thermal desorption unit or via bioremediation. However, if the

untreated sediment is blended with treated soils, successful re-treatment in the thermal desorption unit or via bioremediation is required.

When the stormwater retention pond is cleaned out, the removed sediment shall be sampled and analyzed in accordance with Section III.B of this permit. If the sediment meets all the acceptance criteria in Section III.A.3, the sediment may be thermally or biologically treated. If the sediment meets the acceptance criteria in Section III.A.5, the sediment may be managed under the Direct Reuse Soils Program. If the sediment does not meet all acceptance criteria, CENC shall arrange to dispose of the waste in accordance with DRGSW or Delaware's *Regulations Governing Hazardous Waste* ("DRGHW"), as applicable.

If CENC chooses to manage the sediment from the stormwater retention pond as NHRM, the facility shall comply with the requirements in Section III.D of this permit.

N. Soils Tracking:

Vehicles exiting the facility shall not track soils or other materials onto any public road. When necessary, control measures shall be implemented to comply with this requirement. When sweeping is used as a control measure, all collected soils shall be processed in the thermal desorption unit.

## II. AUTHORIZED WASTE TYPES:

A. Permitted:

Only non-hazardous soils contaminated with petroleum hydrocarbons, non-PCB mineral oils, other natural oils, and MGP coal distillates that are non-hazardous that meet the standards in Section III of this permit may be accepted at this facility. The permittee shall be responsible for verifying that the contaminated soils are not a hazardous waste as defined by RCRA or DRGHW. The types of sources of hydrocarbons that are acceptable for processing at the facility are restricted to soils contaminated with:

1. Automotive crankcase and lubricating oils, fuel oils (ASTM numbers 1 through 6), diesel fuel, gasoline, kerosene and aviation fuel.
2. Coal distillate contaminated soils (MGP soils) that are non-hazardous.
3. Used oil, defined for the purposes of this permit as, "Any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities (DRGHW §279.1)."
4. Waste oil, defined for the purposes of this permit as, "Wastes, such as bottom clean-out waste from virgin fuel oil storage tanks or virgin fuel oil spill cleanup that are not used oil because they have not been "used" for their intended purpose." For the purposes of this permit, solvent-contaminated waste oil does not meet the definition of waste oil.
5. Other natural oils identified in Table 3-2 of the General Operations Plan submitted with the November 18, 2016 revised permit application documents.

Soils contaminated with used or waste oil not complying with these definitions may not be accepted by this facility.

Soils from drill cuttings generated at Underground Storage Tank sites may be placed with the excavated soils for analysis and treatment at the site of origin provided this procedure is permitted by the Underground Storage Tank Regulations in the state the drill cuttings are generated.

NHRM are materials that would otherwise be disposed of as waste that are used to augment treated soils, thereby conferring beneficial properties. Specific NHRM approved per Section III.D may be accepted for blending with treated soils to produce a synthetic soil.

CENC and its clients providing the soil or NHRM are responsible for performing their due diligence to properly characterize the site from which the soil or NHRM is being generated, including the nature of the contamination.

**B. Prohibited:**

1. Any soils or NHRM determined to be hazardous (as defined by RCRA or DRGHW), whether listed or characteristic, by the generator, the generator's representative, CENC, or the Department, shall not be accepted at this facility. If hazardous waste is delivered to this facility, it shall be segregated in a storage building, removed within 72 hours and the affected area decontaminated. Removal, decontamination, and proper disposal of this material are the responsibility of CENC. CENC shall contact the Solid and Hazardous Waste Management Section immediately at (302) 739-9403 in the event it is determined that hazardous waste was accepted at the facility.
2. Blending of any untreated soils or NHRM for the purpose of contaminant dilution below regulated levels is strictly prohibited. Blending may be permitted only to achieve the physical soil characteristics necessary for proper treatment and is limited to blending for the purposes of reducing the Total Petroleum Hydrocarbon ("TPH") concentration below 17,000 ppm and adding drying agents. MGP soils that have been blended, regardless of the percentage or source of blending material, shall be treated strictly as MGP soils.
3. CENC shall not accept any NHRM until the Department has granted written approval.
4. CENC shall not accept any soil or NHRM from a transporter without a valid Delaware Solid Waste Transporter Permit. For liquid waste the transporter shall have the appropriate transporter permit from the Department's Division of Water. For additional information, the Division of Water may be reached at (302) 739-9948.

**III. FACILITY OPERATION:**

The permittee shall operate the facility in accordance with this permit, the permit application dated August 17, 2015, and the revised sections dated November 18, 2016. Conditions of this Permit shall take precedence over any of the above listed documents. Failure to comply with any condition of this Permit or any provision within the aforementioned documents is a violation of this Permit.

A. Approval Process

1. The generator of the soil shall submit documentation demonstrating and certifying that the soil is non-hazardous.
2. Sampling and analysis shall be conducted by the generator in accordance with the procedures specified in this Permit.
3. Acceptance criteria:
  - a. Soils shall not exhibit any RCRA hazardous characteristics
  - b. Using the Toxicity Characteristic Leaching Procedure (“TCLP”) method, soils shall not exceed RCRA toxicity thresholds
  - c. Total polychlorinated biphenyls (“PCBs”) shall not exceed 3.0 mg/kg
4. At least one representative, composite sample shall be taken for every 1,000 tons of soils excavated or as determined on a site-by-site basis approved in writing by the Department and a complete analysis performed by an independent laboratory, as required by this section. However, based on site conditions, more frequent sampling and analysis may be warranted. If a site-by-site basis sampling plan is invoked, the Department may set an alternate number of samples, but not less than the minimum number of samples indicated by the statistical analysis described in EPA SW-846, Chapter 9. Emphasis shall be placed on ensuring that the samples taken accurately represent actual site conditions.
5. For non-hazardous soils from petroleum-containing Aboveground or Underground Storage Tanks (“AST” or “UST”) within Delaware, excluding used oil or waste oil, the analytical requirements requested by the Department’s Tanks Management Section (“TMS”) are adequate for acceptance of said soils at this facility. However, the TMS registration form, as well as the analytical results, shall accompany said soils during transportation and shall be maintained on file at CENC as evidence that the soils in question were generated within the State of Delaware and that they are non-hazardous. These records must be maintained for a minimum of three (3) years and made immediately available for the Department’s review.

B. Sampling and Analysis Requirements

1. The soil and NHRM sampling procedures and test methods shall be those found in the most current legal edition of EPA publication number SW-846, “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.”
2. Sampling shall be conducted by an individual competent in the proper sampling techniques.
3. Sampling equipment shall be properly decontaminated prior to each sampling event.
4. All soil and NHRM samples and analyses shall accurately represent the type and degree of contaminants present.
5. If site knowledge or history indicates the possibility of contamination by herbicides, pesticides, or any other contaminant, an analysis of any suspect contaminants shall be performed for comparison to SIRS Reporting Levels in effect at the time of analysis.
  - a. If petroleum hydrocarbon contaminated soil from a Delaware Hazardous Substance Clean-up Act (“HSCA”) site exceeds any SIRS Reporting Level, CENC may accept the soil if the generator can provide documentation showing SIRS has been notified. If such documentation is not provided, CENC shall not accept the soil.

- b. If petroleum hydrocarbon contaminated soil from out-of-state or from a Delaware site not regulated through HSCA exceeds any SIRS Reporting Level, CENC may accept the soil but shall conduct a risk assessment of the soil based on the proposed end use and analytical results obtained after treatment. The amount of risk acceptable for any use is  $\leq 1 \times 10^{-5}$  and a Hazard Index of  $\leq 1$ .
- 6. Soil from any site that has been abandoned will require the generator to analyze for Total Organic Halides ("TOX") for the potential presence of pesticides and herbicides.
- 7. Confirmatory Sampling and Analysis:
  - a. Prior to acceptance, a representative, composite sample shall be obtained from each individual truck arriving at CENC. Individual truck samples from the same generator and same soil project (same approval number) may be combined to form a composite sample for analysis in the facility's on-site laboratory. CENC may combine the samples to form two (2) composite samples for the first 100 tons of soils received from any given soil project. Subsequent to the first 100 tons, CENC may combine the samples to form one (1) composite sample for every 100 tons thereafter.
  - b. CENC may allow the first four (4) loads of contaminated soil of each operating day to be unloaded into the appropriate storage area prior to sampling only if all of the following conditions are met:
    - i. Pre-acceptance sampling protocol described in Section III.A.4 is carried out;
    - ii. Contaminated soil originates from the same project and generator;
    - iii. None of the loads of contaminated soil from the same project and generator exceed 50 mg/kg TOX as analyzed by CENC, when applicable, for the first five (5) days during which soil from the same project and generator was accepted at CENC; and,
    - iv. All TOX results, if applicable, for the contaminated soil from the same project and generator are less than 12.5 mg/kg

If any sample of soil from the same project and generator fails to meet the criteria specified in Section III.B.7.b, CENC shall revert back to the original sampling and analysis protocol.
  - c. TPH shall be measured by DRO ("Diesel Range Organics") analysis when the following petroleum hydrocarbons are present: automotive lubricating oils, fuel oils (ASTM numbers 1 through 6), diesel fuel, kerosene, and aviation fuel. GRO ("Gasoline Range Organics") analysis shall be used when the contaminant is gasoline.
  - d. When required by Section III.B.5 or III.B.6 of the Permit, each sample shall be analyzed for TOX following the Standard Operating Procedure: Operation of TOX Analyzer provided in Appendix X of the General Operations Plan. The TOX analysis results will be evaluated as follows:
    - i. If the chloride test results are less than 50 parts per million (ppm), CENC can accept the soils.
    - ii. If the chloride test results are greater than 500 ppm, CENC shall reject the soils.

- iii. If the chloride test results are greater than or equal to 50 ppm and less than or equal to 500 ppm, CENC shall analyze the soils for PCBs using the current EPA approved method.
- 8. Post-Treatment and Direct Reuse Soils:
  - a. Following thermal or biological treatment of the contaminated soils, a representative, composite sample of the remediated soils shall be collected every 300 tons or at the end of the working day, whichever occurs first.
  - b. Samples shall be submitted to a laboratory for analysis within three (3) working days and analyzed for DRO in accordance with the most current, legal version of EPA Method 8015. Analytical results are to be received within three (3) working days.
  - c. In addition to the DRO analysis specified above, CENC shall obtain a representative, composite sample of each processed batch (including thermally or biologically remediated soils, thermally or biologically remediated soils blended with NHRM, and direct reuse soils). The batch size shall not exceed 4,000 tons. The sample shall be obtained following the procedures set forth in Appendix VI: Post Process Batch Soil Pile Sampling Procedures of the General Operations Plan.
  - d. All treated and direct reuse soils shall meet the reuse criteria set forth in Section III.G.2 of this Permit.
  - e. The Department retains the right to collect, at any reasonable time, samples of any contaminated soils before and/or after treatment, NHRM before and/or after blending, direct reuse soils, and groundwater samples for complete analyses as described in this permit. Regardless of the frequency of sample collection by the Department, CENC shall bear the expense of all samples obtained and analyzed by the Department only once per calendar quarter. This restriction does not apply to cost-recovery related to documented, formal enforcement actions. CENC and the Department retain the right to split samples for separate analysis.

C. Load Inspection/Rejection

- 1. Each load shall be visually inspected by trained CENC personnel when the incoming truck is on the scale.
- 2. If the load does not meet the acceptance criteria, CENC shall contact the generator to resolve any discrepancies and, if necessary, reject the shipment.
- 3. CENC shall notify the CAPS within 24 hours of any shipment being rejected.
- 4. If material has been off-loaded at CENC prior to determining the load is unacceptable, CENC shall immediately notify the SHMWS and shall properly remove the soil from the CENC facility within 72 hours of the material being unloaded.
- 5. If CENC determines the material is a hazardous waste, CENC shall notify the CAPS immediately and properly remove and dispose of the hazardous waste within 72 hours of the hazardous waste determination. CENC shall maintain a copy of the hazardous waste manifest(s) at the CENC facility for a period of three years.
- 6. CENC may not accept soils or NHRM from trucks which do not have a valid Delaware Solid Waste Transporters permit for the type of waste being transported. For liquid waste the transporter shall have the appropriate transporter



permit from the Department's Division of Water. For additional information, the Division of Water may be reached at (302) 739-9948.

D. Non-Hazardous Residual Materials

1. Solid and semi-solid NHRM may include biosolids, lime filter cakes, coal ash, paper pulp, water treatment solids, dredge spoils. Liquid NHRM may include non-hazardous water-bound waste ("WBW").
2. While the process of adding NHRM to treated soils to improve their reuse has conceptually been approved, the sampling frequency and analytical parameters required to accept a specific NHRM shall be approved by the Department for each NHRM on a case-by-case basis.
3. CENC shall not accept any NHRM until the Department has granted written approval. Once CENC has demonstrated to the Department that the NHRM is an acceptable material, CENC shall request that the specific NHRM be added to the permit and then the sampling frequency and analytical parameters will be formalized and become a requirement of this permit.
4. CENC shall notify the Hamilton Park Civic Association via certified mail within fifteen (15) calendar days of approval when a new category of NHRM is approved.
5. After Department approval, solid and semi-solid NHRM may be added to remediated soil to improve soil quality and may be added to hot soils exiting the remediation unit to add moisture to complete fugitive dust control and to reach optimum soil moisture content. Liquid NHRM may be used as a cooling medium for the mixer/cooler unit in place of potable cooling water.
6. Upon the Department's approval, CENC shall manage all NHRM in accordance with Operating Module 2: Management Procedures for Non-Hazardous Recyclable Materials, as submitted with CENC's permit application dated September 2015 and revised sections dated November 2016.
7. Soil blended with NHRM shall be used in accordance with the requirements specified in Section III.G.2 of this Permit.

E. Processing Requirements:

1. All incoming soils shall be screened to remove aggregate material such as stone, brick, rock, concrete, and asphalt, as well as process residuals such as paper, wood, and plastic. Screening may be done by hand or by using a screener. Screening shall occur on the main asphalt-paved area, with appropriate management controls, to prevent contaminated soil or leachate from being released to the environment.
2. Thermal Remediation
  - a. Soils with a TPH greater than 17,000 ppm may not enter the thermal desorption unit without prior blending to levels below 17,000 ppm.
  - b. The minimum temperature of the thermal desorption unit shall be sufficient to meet the reuse requirements in Section III.G.2 of this permit. In addition, the following minimum operating temperatures shall be obtained prior to soils entering the thermal desorption unit and maintained for the duration of soil treatment:

- i. For soils containing gasoline range organic contamination (petroleum hydrocarbons having a boiling point less than 338°F), the minimum operating temperature shall be 230°F.
  - ii. For soils containing diesel range organic contamination (petroleum hydrocarbons having a boiling point greater than or equal to 338°F), the minimum operating temperature shall be 350°F.
  - iii. For MGP-contaminated soils, the minimum operating temperature shall be 400°F.
- 3. Biological Remediation
  - a. Microbial agents shall be applied in a metered amount and shall be thoroughly mixed.
  - b. CENC shall maintain proper aeration in order to maintain a suitable level of biological activity.
- 4. Soil Drying Agents
  - a. In the event that any incoming soils are too wet to effectively screen the soils to remove residual materials, CENC may add commercially available soil drying agents, such as sand, clay, vermiculite, cornstarch, diatomaceous earth, lime, lime kiln dust (“LKD”), cement kiln dust (“CKD”), or Portland cement, to reduce the moisture content of the soils. Soil drying agents may be added to biologically remediated soil to ensure it meets the geotechnical requirements of the end-use site.
  - b. Soil drying agents, if used, shall not exceed 7% by weight of the contaminated soil to be processed.
  - c. If the facility desires to utilize LKD or CKD, CENC shall submit documentation to the Department demonstrating that it meets the appropriate end use criteria. The Department will issue an approval letter specific to the source of the LKD or CKD material. Should CENC wish to accept LKD or CKD from a different source, a new approval shall be obtained. CENC shall not accept LKD or CKD (or any other waste to be reused) prior to the issuance of the Department’s written approval.
- 5. Aggregate
  - a. Screening of aggregate shall include the use of a photoionization detector (“PID”) to verify that contaminants have been successfully removed (less than 2 ppm VOCs).
  - b. CENC shall conduct screening of aggregate in accordance with its “Standard Operating Procedures - Management of Aggregate Material to be Used at Cherry Island Landfill” dated April 21, 2010.
  - c. Aggregate found to be uncontaminated shall be sent to an appropriate facility for further processing, recycling, or disposal within three days of the determination. Aggregate determined to be contaminated, or awaiting contamination determination, shall be stored under cover when not being processed.

F. Storage:

- 1. All storage buildings utilized shall be completely roofed with walls and concrete floors fully intact.

2. CENC shall not store more than 25,000 tons combined of thermally treated soil, biologically treated soil, direct reuse soil, and treated soil blended with NHRM.
3. Aggregate material determined to be contaminated, or awaiting contamination determination, shall be stored under cover when not being processed.
4. Aggregate material determined to be uncontaminated shall be stored in the facility's designated aggregate storage area.
5. Un-remediated Soils and NHRM
  - a. The quantity of untreated soils in storage shall not exceed 16,000 tons.
  - b. Soils awaiting thermal remediation and NHRM shall be stored in one of three buildings identified as "TPH Storage" on the attached Site Plan, submitted as part of the September 2015 permit application, until processed for treatment.
  - c. Soils awaiting biological remediation shall be primarily stored in Building B but may be stored in other unprocessed soil storage buildings so long as they remain segregated.
  - d. No untreated soils, including untreated soils which have been removed from stone, brick, concrete, or related materials, shall be stored outside. Stone, brick, concrete or other materials screened from contaminated soil shall be stored in a storage building until confirmation that all contaminated soils have been removed or separated. Following confirmation, the aggregate material may be stored outside and shall be removed from the CENC site for further processing, recycling, or disposal within three days of the confirmation.
  - e. MGP soils and NHRM shall be stored in a separate building from other permitted soils.
  - f. CENC shall not store a load of contaminated soil or NHRM longer than 56 days. CENC shall be able to immediately demonstrate the length of time each load has been on-site.
  - g. Liquid NHRM shall be contained in a storage tank with a secondary containment capacity at least 110 percent of the storage tank.
6. Thermally Remediated Soils ("TRS")
  - a. Thermally remediated soils may be stockpiled uncovered, for up to 3 working days, while awaiting confirmatory analytical results. If the results indicate the soils achieve the reuse standards, they may remain uncovered.
  - b. Thermally remediated soils shall be stored in the Finished Pile Storage Area.
  - c. Soils not meeting reuse standards shall be properly disposed of or retreated, re-sampled, and reanalyzed within 3 working days of receiving the initial analytical results. While awaiting retreatment, the soil shall be covered with an impervious tarp or placed in one of the storage buildings identified as "TPH Storage". Within 24 hours of receiving analytical results revealing a second treatment failure, the CAPS shall be notified of the reason for treatment failure and a plan to remedy the unsuccessfully treated soils.
7. Biologically Remediated Soils

- a. Soil in the process of biological remediation shall be stored primarily in Building B, but may be stored in other onsite buildings as long as it remains segregated.
  - b. Biologically remediated soils may be stored covered, for up to 3 working days, while awaiting confirmatory analytical results. If the results indicate the soils achieve the reuse standards, they may be stored uncovered.
  - c. Soils not meeting reuse standards shall be retreated, re-sampled, and reanalyzed within 3 working days of receiving the initial analytical results. While awaiting retreatment, the soil shall be covered with an impervious tarp or placed in one of the storage buildings. Within 24 hours of receiving analytical results revealing a second treatment failure, the CAPS shall be notified of the reason for treatment failure and a plan to remedy or dispose of the unsuccessfully treated soils.
8. Direct Reuse Soils (“DRS”)
- a. After physical processing is complete, all loads shall be stored in DRS Stockpile Areas 1 or 2.
  - b. The quantity of direct reuse soils stored at this facility shall not exceed 10,000 tons.

G. Reuse:

- 1. Remediated soils may be beneficially re-used for the following:
  - a. Road base fill
  - b. Topsoil supplement
  - c. Landfill alternate daily cover or intermediate cover
  - d. Structural and non-structural fill
  - e. Final construction cover
  - f. Asphalt plant feed
- 2. Remediated soils, blends with NHRM, and direct reuse soils shall be used in accordance with the requirements below :
  - a. Schedule 1 applies to acceptable uses as topsoil for commercial or industrial reuse, such as blending with compost and landscaping applications for the purposes of establishing turf. Soils used in accordance with these uses shall meet the SIRS Screening Levels in effect at the time of analysis, which, over time, may differ from what is shown in Schedule 1.
  - b. Schedule 2 applies to acceptable uses as construction material, road sub-base, structural and non-structural fill and landfill top or final construction cover. Soils used in accordance with these uses shall meet the SIRS Reporting Levels in effect at the time of analysis, which, over time, may differ from what is shown in Schedule 2.
  - c. Schedule 3 applies to acceptable uses as asphalt plant feed and alternate daily cover or intermediate cover at a Delaware landfill. Soils used in accordance with these uses, except as alternate or intermediate cover, shall meet the SIRS Reporting Levels, which, over time, may differ from what is shown in Schedule 3. Soils used as alternate or intermediate cover at a Delaware landfill shall meet the limits shown in Schedule 3 for that use, as determined by the updated risk assessment evaluation dated September 2019.

- d. CENC shall also analyze treated and direct reuse soils for any additional parameters not listed on Schedules 1-3 but which are reasonably expected to be present based on incoming analysis and onsite processing. These additional parameters shall meet the SIRS Screening Levels in effect at the time of analysis if intended for reuse described in Schedule 1 or shall meet the SIRS Reporting Levels in effect at the time of analysis if intended for reuse described in Schedule 2 or Schedule 3.
- e. Processed soils supplied as landfill cover shall also meet the permitted facility's criteria for landfill cover. CENC shall maintain on site a current copy of the permitted facility's written approval issued by the Department.
- f. Processed soils or blends from this facility shall not be used for landscaping that will result in direct dermal contact or for residential or agricultural purposes.
- g. Processed soils or blends from this facility shall not be used below the seasonal high water table or in direct contact with any surface water.
- h. A contract to reuse the processed and NHRM blended soils in an environmentally sound manner shall be maintained.
- i. An environmentally sound policy for the reuse of the stone, brick, concrete and related material generated from the treatment and handling process shall also be maintained.

H. Reporting:

- 1. Emergency Reporting - As required by 7 Del. C. Section 6028, the permittee shall report any unpermitted release of a pollutant or air contaminant in excess of the reportable quantity at the facility to the Department's Emergency Response number, 1-800-662-8802, immediately after appropriate emergency plans have been implemented, but no later than 24 hours after implementation. This reporting requirement shall also apply to fire or any other occurrence where equipment failure or malfunction results in, or has the potential to result in, an unpermitted release of a pollutant. If the release exceeds a permitted limit, additional reporting requirements set forth in the permit may apply.
- 2. Quarterly and annual reports shall be submitted to:  

Chad Dolt  
 DNREC-CAPS  
 89 Kings Hwy.  
 Dover, DE 19901
- 3. Quarterly Reporting – The following information is required on a quarterly basis, to be received by the Department no later than the 15th (April 15th, July 15th, October 15th, and January 15th) after every quarter.
  - a. Rolling annual average concentration of constituents for soils used as alternate or intermediate landfill cover, as listed on the attached Schedule 3, for the prior 12 months
  - b. The number of loads and total tonnage of soils and NHRM accepted by CENC
  - c. Type of reuse, quantity, and location of thermally remediated soils, biologically remediate soils, NHRM amended soils, and direct reuse soils.
  - d. Groundwater monitoring analytical report(s)
- 4. Annual Reporting - An annual report for the preceding calendar year shall be submitted by March 1<sup>st</sup> of every year with the following information:

- a. CENC-generated approval number, generator, site of origination (name, street address, city, state and zip code), type of contamination (spill, MGP, UST, direct reuse soils), level of contamination (TPH, Polynuclear Aromatic Hydrocarbons (“PAHs”), combined Benzene, Toluene, Ethylbenzene, and Xylene (“BTEX”)), and quantity of soils in tons.
- b. Ticket number, incoming date, approval number, truck number, driver’s name, solid waste or the Department’s Division of Water Resources transporters number and net tons or gallons, as appropriate, of the load.
- c. The number of loads and total tonnage of soils or NHRM delivered by each transporter.
- d. Rejected loads and reason for rejection.
- e. Remediated soils requiring re-treatment, detailed explanation for why soils did not meet the reuse criteria after the first treatment attempt, quantity, level and type of contamination.
- f. Type of reuse, quantity, and location of thermally remediated soils, NHRM amended soils, and direct reuse soils.
- g. Thermal treatment facility and biological remediation facility equipment maintenance and repair.
- h. Rolling annual average concentration of constituents for soils used as alternate or intermediate landfill cover, as listed on the attached Schedule 3, for the preceding calendar year.
- i. AST and UST registration forms and analytical results.
- j. The quantity of MGP soils blended with non-MGP soils, the percentages of the blended mixture and the operating temperature of the thermal desorber during remediation of the blended soils.
- k. The type and quantity of NHRM blended with remediated soils to produce a synthetic soil for beneficial reuse.
- l. The treatment levels achieved for TPH and PAHs.
- m. The type and quantity of NHRM received in tons or gallons (as appropriate).
- n. Summary of groundwater monitoring results, as described in Section III.K of this permit.

5. Financial Assurance:

No later than March 1st of each year, CENC shall submit an updated financial assurance document, as required in DRGSW Section 4.1.11. The submittal shall also include an updated estimate of the cost of third party closure of the facility which has been adjusted for inflation. If the Department determines at any time that current financial assurance is inadequate for the site’s current actual conditions, the Department reserves the right to require an increase in financial assurance in order to assure CENC’s compliance with DRGSW 4.1.11.2.1.

I. Recordkeeping:

- 1. The following information shall be recorded and the records retained by CENC for at least three (3) years. The information shall be kept onsite and made immediately available to the Department for review upon request.
  - a. A record of the type and weight of all soils received at the site each day, listed by type of soil (e.g. DRS, TRS, BRS) and hauler.

- b. Documentation from the generator of MGP-contaminated soils, their designated representative, or the appropriate regulatory agency demonstrating that:
  - i. The site or process where the soils were generated was not contaminated by a listed or characteristic hazardous waste as defined by RCRA or DRGHW.
  - ii. For non-hazardous MGP contaminated soils, that oversight of MGP site remediation was conducted by the appropriate regulatory agency and that thermal desorption at CENC is an acceptable form of treatment for these soils.
- c. A record of the type, re-use, and weight of thermally and biologically remediated soils, NHRM amended soils, and DRS soils sent offsite each day and the name and address of the end-market user to which the soils were sent.
- d. A record of any rejected loads, the reason for rejection, and final disposition of the rejected load. If any rejected loads are determined to be hazardous waste, the hazardous waste manifest shall be maintained as well.
- e. Site entry tickets including the ticket number, incoming date, approval number, transporter name and permit number, and net tons or gallons, as appropriate, of the load.
- f. TMS registration forms, as well as the associated analytical results
- g. Documentation demonstrating storage time limits
- h. Documentation showing notification to SIRS regarding incoming soils exceeding SIRS Reporting Levels
- i. Risk assessment models used to demonstrate acceptable risk of treated soil.
- j. A record of fires, spills, explosions, and uncontrolled releases that occurred at the facility.
- k. Notification(s) to the Hamilton Park Civic Association when a new category of NHRM is approved
- l. Safety Data Sheets or detailed chemical analysis for drying agents used
- m. Equipment and safety training records, including the name of the employee, name of the trainer/instructor, brief description of the training, date training was conducted, and the employee's signature documenting attendance.
- n. Inspection records
- o. Process monitoring data
- p. Records of any odor, litter, vector or dust complaints received by CENC concerning the facility.
- q. Records of fugitive dust control application logs, including the date, activity performed, run time and location(s), and any employee comments
- r. Analytical results from
  - i. Off-site laboratory for pre-acceptance
  - ii. Groundwater monitoring, as described in Section III.K of this Permit.
  - iii. Spent bags from the baghouse
  - iv. Remediated and direct reuse soils

- s. Current copy of all permitted facilities' written approvals for alternate daily or intermediate cover as issued by the Department
- 2. A copy of the most current version of this permit shall be maintained at the facility and made immediately available to the Department's representatives upon request.

J. Closure Plan:

Annually, the third party cost estimate for closing the facility shall be updated, per the requirements of DRGSW Section 9.5.3.2. Additionally, the closure plan shall be kept current, as required by DRGSW 4.4.1.11. If a change is required to the closure plan, CENC shall apply for a permit modification and receive approval prior to implementing the change.

K. Groundwater Monitoring:

The permittee shall sample monitoring wells MW1, MW2, MW3, MW4, MW5, MW6 and MW7 quarterly (January, April, July, and October) and analyze for TPH, BTEX, specific conductance, and pH. The quarterly sampling results shall be submitted with the quarterly reports. If any of the wells are not sampled during a given quarter, a detailed explanation shall be provided to the Department as to why the wells were unable to be sampled and any corrective actions to be taken to ensure the well can be sampled in the future. If any result exceeds the SIRS Screening Level in effect at the time of the sampling, CENC shall:

- a. Notify the CAPS and provide the analytical report documenting the exceedance;
- b. Within 90 days of CENC's receipt of the analytical data, resample to confirm the result and/or demonstrate that the result was an error or that the increase was due to a source other than CENC's facility;
- c. Notify the Department of the result of confirmation, including the analytical report, within 14 days of CENC's receipt of the results; and
- d. If a release is confirmed, perform an assessment of corrective measure subject to Department approval.

Issued by: \_\_\_\_\_

Jason Sunde  
Environmental Program Administrator  
Compliance and Permitting Section

\_\_\_\_\_  
Date





CLEAN EARTH OF NEW CASTLE, LLC AERIAL MAP